included in the study were with the mean age of 57 ± 14 of which 66.5% were male and 60.8% of the patients suffered from diabetes being a major cause for ESRD. Patients with age > 45, higher prevalence of diabetes, IDH, troponin T and other infection showed P value of 0.013, 0.002, 0.02, 0.05, 0.016 respectively, therefore predisposing these patient population at higher risk for SCD. Use of central venous catheter was associated with a 26.9 fold increase risk of death within first 90 days of initiation of HD. **CONCLUSIONS:** Our study showed, type of vascular access for HD procedure, age, IHD, diabetes, LVH, LVSD, and EF are important factors for the survival of these patients and off the other factors found significantly associated to SCD were heart rate, breathlessness, other infections, catheter use, sodium levels and cholesterol levels.

PMD23

IDENTIFYING THE OPTIMAL USE OF CTCS IN THE EARLY STAGING PHASE OF BREAST CANCER

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OBJECTIVES: Circulating tumour cells (CTCs) in the blood can give important information about the prognosis and treatment options for cancer patients. Methods like cell-search are not sensitive enough because the blood samples are small (7,5 mL). Currently a technique is developed which can separate CTCs from the whole blood and is called the CTC Trap. This study addresses the potential impact of implementing the CTC Trap in addition to currently used imaging techniques in early staging of primary stage I-III breast cancer in women. **METHODS:** The early staging process has been identified using the Dutch breast cancer guideline. This process is displayed in a decision tree. Three points in this process have been identified as possible implementation options for the CTC Trap. A simulation model has been built in Excel to simulate the cost-effectiveness of implementing the CTC Trap at these three different points. **RESULTS:** Potentially relevant points for the CTC trap are: 1) following negative sentinel lymph node procedure to test for micro metastases, 2) following negative result of initial MRI to test for (micro-) metastases, 3) following negative results of further imaging. Usual care resulted in an average survival of 2,42 years, a 3-year survival of 93,71%, 1,51 QALYs and a cost of € 992,56. When implemented at all 3 implementation points simultaneously CTC Trap resulted in an average survival of 2,84 years, a 3-year survival of 97,46 %, 1,84 QALYS and a total cost of € 6.035,45. **CONCLUSIONS:** CTCs clearly have the potential to improve overall survival. Use of CTCs can potentially improve survival with 0,42 years and improve QALYs with 0,34. Costs do increase at all options but from a health economic perspective it is most valuable to implement CTC Trap in option 1) following negative sentinel lymph node procedure to test for (micro-) metastases.

MEDICAL DEVICE/DIAGNOSTICS – Cost Studies

PMD24

A BUDGET IMPACT ANALYSIS TO ESTIMATE THE ECONOMIC CONSEQUENCES OF AN INCREASE OF MEDICATION COMPLIANCE RELATED TO A POTENTIAL IMPROVEMENT OF THE INHALATION TECHNIQUE WITH SPIROMAX® COMPARED WITH TURBUHALER® IN MODERATE TO SEVERE ASTHMATIC PATIENTS IN SPAIN

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OBJECTIVES: To assess the economic impact of the introduction of budesonide/formoterol fixed-dose combination (FDC) with a new inhaler, Spiromax®, focusing on an increment of medication compliance due to an enhancement of the inhalation technique for the treatment of moderate to severe asthmatics in five Spanish regions including Andalusia, Catalonia, Galicia, Madrid and Valencia. **METHODS:** A 4-year budget impact model was developed for the period 2015—2018 from the Spanish Healthcare System perspective. Budesonide/formoterol FDCs delivered by Turbuhaler® and Spiromax® were considered in this model. All inputs were obtained from the literature: regional data on asthma prevalence, non-compliance rates due to a poor inhaler technique, healthcare utilization related to non-compliance, medical resources associated with asthma management, budesonide/formoterol adverse event rates, and resource utilization during hospitalization and at the emergency room. Based on the unit costs for drugs and medical resources, the annual treatment costs per patient associated to each inhaler and the annual cost per patient with an improvement in compliance were determined to estimate the overall budget impact. **RESULTS:** The population with moderate to severe asthma treated with budesonide/formoterol FDCs in 2015 was estimated at 25,081, 12,392, 16,097, 17,829 and 15,148 patients in Andalusia, Catalonia, Galicia, Madrid and Valencia, respectively. Annual mean cost per patient was estimated at €1,619 before the introduction of Spiromax®, and at €1,481 after its introduction and due to an improvement in medication compliance. Based on the forecast uptake of budesonide/formoterol FDC delivered by Spiromax®, the model estimated the budget savings at €2.92 million in Andalusia, €1.35 million in Catalonia, €1.79 million in Galicia, €1.83 million in Madrid and 1.30 € million in Valencia, over the next four years. **CONCLUSIONS:** The introduction of budesonide/formoterol FDC delivered by Spiromax® for the treatment of moderate to severe asthma is likely to reduce the healthcare budget for five Spanish regions.

PMD25

BUDGET IMPACT ANALYSIS OF PHASED RADIOFREQUENCY (RF) CATHETER ABLATION SYSTEM IN THE TREATMENT OF ATRIAL FIBRILLATION (AF) IN TURKEY

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OBJECTIVES: To estimate the 3-year budget impact of phased RF ablation system composed of three catheters -PVAC, MASC, MAAC- for the treatment of symptomatic, drug-refractory paroxysmal or persistent AF (PAF or CAF) patients in the Turkish setting. **METHODS:** Payer perspective is applied. Only direct costs are considered. Literature research is performed for epidemiologic data. Comparators are identified as "catheter ablation" technologies in the positive list: (1) magnetic (2) electric censored 3D-mapping catheter ablation, (3) pulmonary vein balloon cryo-ablation (Medtronic ArcticFront). Device and procedure costs are derived from positive list prices For PVAC, MASC and MAAC offer prices are taken. Complication, re-hospitalization rates and length-of-stay are similar, thus related costs are ignored. AF-related-stroke costs are calculated based on comparative single-procedure success data, AF-related-stroke risk, and AF-related-stroke costs from a local expert panel. Market shares are derived from Medtronic sales data (May 2014-May 2015) for cryo-ablation and AF market data. Two scenarios are run: (1) PVAC-only for PAF+CAF population, (2) MASC+MAAC combined with PVAC and/or ArcticFront for CAF-only. **RESULTS:** Total AF population prediction is based on 50+ population. Prevalence data is derived from several global studies. The indicated population for catheter ablation is around 5,500 patients annually, the total catheter ablation market size corresponding to one-fourth of it; mainly due to insufficient number of accredited centers and physicians. 3-year budget impact per patient is 270TL, 276TL and 334TL in first and 268TL, 274TL and 334TL in second scenario. **CONCLUSIONS:** If the limitations in quality-of-life, general health and related indirect costs are considered, the socioeconomic burden of disease would be significantly high. Indirect, long-term savings provided by significant shortening of procedure times with new technology are not included in the analysis, due to payer perspective. Considering these indirect costs and savings, the budget impact of new phased RF ablation system would be more positive.

PMD26

ESTIMATING THE ECONOMIC CONSEQUENCES OF AN INCREASED MEDICATION COMPLIANCE DUE TO A POTENTIAL IMPROVEMENT OF THE INHALER TECHNIQUE WITH SPIROMAX® COMPARED WITH TURBUHALER® IN MODERATE TO SEVERE PATIENTS WITH COPD IN SPAIN

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OBJECTIVES: To estimate the economic impact of the introduction of budesonide/formoterol fixed-dose combination (FDC) with a new inhaler, Spiromax®, focusing on an increment of medication compliance due to an enhancement of the inhalation technique for the treatment of Chronic Obstructive Pulmonary Disease (COPD) patients in five Spanish regions including Andalusia, Catalonia, Galicia, Madrid and Valencia. **METHODS:** A 4-year budget impact model was developed for the period 2015–2018 for patients with COPD from the Spanish Healthcare System perspective. Budesonide/formoterol FDCs delivered by Turbuhaler® and Spiromax® inhalers were considered. All inputs were obtained from the published literature: regional data on COPD prevalence, non-compliance rates due to a poor inhaler technique, healthcare utilization related to non-compliance, medical resources associated with COPD management, budesonide/formoterol adverse event rates, and resource utilization during hospitalization and at the emergency room. Based on the unit costs for drugs and medical resources, the annual treatment costs per patient associated to each inhaler and the annual cost per patient with an improvement in compliance were determined to estimate the overall budget impact. **RESULTS:** The population with moderate to severe COPD treated with budesonide/formoterol FDCs in 2015 was estimated at 19,514, 20,016, 7,778, 21,289 and 9,936 patients in Andalusia, Catalonia, Galicia, Madrid and Valencia, respectively. Annual mean cost per patient was €1,384 before the introduction of Spiromax® and €1,242 after its introduction and due to an improvement in medication compliance. Based on the forecast uptake of budesonide/formoterol FDC delivered by Spiromax®, the model estimated the budget savings at €2.34 million in Andalusia, €2.23 millions in Catalonia, €0.87 millions in Galicia, €2.23 million in Madrid and €0.77 million in Valencia, over the next four years. **CONCLUSIONS:** The introduction of budesonide/formoterol FDC delivered by Spiromax® for the treatment of moderate and severe COPD patients is likely to represent savings for all five regions.

PMD27

BUDGET IMPACT ANALYSIS OF N-TERMINAL PRO-B-TYPE NATRIURETIC PEPTIDE TESTING FOR THE DIAGNOSIS AND PROGNOSIS OF HEART FAILURE IN GREECE

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OBJECTIVES: Heart failure (HF) is a very complex condition, with a wide range of unspecific clinical symptoms rendering its diagnosis very challenging, and associated co-morbidities contributing to increased expenditures. N-terminal pro-B-type natriuretic peptide (NTproBNP) levels increase in the blood when, in the course of developing acute HF, symptoms worsen. Therefore, NT-proBNP can be used as a specific diagnostic test of acute HF, whereas in patients with dyspnea it can further help to assess prognosis. The objective of the present study was to perform a cost and budget impact analysis of NT-proBNP testing. **METHODS:** A decision-analytic model formed the basis of the analysis. The model estimated the clinical consequences and outcomes and subsequent costs for patients presenting to the emergency department with dyspnea. Two diagnostic assessments were compared, NT-proBNP-supported diagnosis versus standard of care. The potential cost reduction, deriving from adequate diagnosis and prognosis/monitoring, as well as the operating reductions (i.e hospitalizations) generated by NT-proBNP implementation were estimated. Clinical inputs derived from published literature and an expert panel provided insights into